identification indicia to permit tracking of the individual units as they are handled during deployment and retrieval. Likewise, each unit may include a GPS transducer **42** which permits the unit's location to be determined (to the extent a unit is deployed in a location in which GPS is effective).

FIG. **1** also shows a radio antennae **44** which is communication with a radio unit **45** disposed within case **12**.

A connector **46** for permitting communication with pod **10** may also be disposed on case **12**. Such communication may occur when pod **10** is in storage at a central command unit or even to the extent data is simply retrieved by an operator who travels out to the pod's deployment location. Connector **46** may be a standard pin connector or may be an infrared or similar connector that requires no hard wiring in order to communicate with pod **10**. Via connector **46**, pod **10** may be serviced without removing one of plates **26**, **28** or otherwise opening case **12**. Specifically, connector **46** permits quality control tests to be run, recorded seismic data to be extracted, clock **20** to be synchronized and power source **22** to be recharged. A sealing connector cap **47** may also be provided to protect connector **46**. For under water uses or other wet environments, connector cap **47** is preferably water tight. Utilizing such a connector cap **47**, connector **46** may be any standard connector that satisfies the desired functions of the pod and need not be of the type normally required of external connectors subjected to extreme or corrosive environments.

One function of the seismic data recording unit of the invention is the continuous operation of the unit. In this aspect of the invention, data acquisition is initiated prior to positioning of the unit on the earth's surface, i.e., prior to deployment. For example, units may be activated at a central location prior to trucking them out to the field. Systems that are activated and begin acquiring data prior to deployment are thereby stabilized prior to the time synchronization and seismic data recording are desired. This minimizes the likelihood that an altered state in electronics operation will have an effect of data integrity.

In a similar embodiment, data recording is initiated prior to positioning along a receiver line. Again, this permits units to stabilize prior to the time synchronization and seismic data recording are desired. To this end, one component of system stabilization is clock stabilization. Of the various components of the system, it is well known that clocks typically take a long time to stabilize. Thus, in one embodiment of the invention, whether the unit is continuously detecting data or continuously recording data, the clock always remains on.

In either of the preceding two methods, the unit can be utilized in several cycles of deployment and retrieval without interrupting the continuous operation of the unit. Thus, for example, prior to deployment, recording is initiated. The device is deployed, retrieved and redeployed, all while recording is continued. As long as memory is sufficient, this continuous recording during multiple cycles of deployment and redeployment can be maintained.

In this regard, to the extent the seismic data unit includes wrap around memory, it can continuously record even when not in use in seismic detection. Thus, in addition to the advantages described above, initiation or start instructions become unnecessary. Further, continuous recording utilizing wrap around memory functions as a back-up for data acquired from prior recordings until such time as the prior data is written over. An additional advantage is that the device is ready for deployment at any time as long as the clock is synchronized.

To the extent recording is continued after a unit has been retrieved, routine operations such as data retrieval, quality control tests and battery charging can take place without interrupting recording. One benefit of such a system is that the device can be utilized to record quality control test data rather than seismic data when conducting quality control tests. In other words, the data input changes from seismic data to quality control data. Once quality control is complete, the device may resume recording seismic data or other desired data, such as data related to position and timing.

While "continuous" unit operation has been described temporally in one embodiment as setting operation parameters to initiate operation prior to deployment of the unit, for purposes of the meaning of "continuous" as used herein, the time period of unit operation may simply be initiated prior to a shot and continue through a series of shots or shot cycles and may also include continued recording of a unit through a series of shots or shot cycles. In another embodiment, while continuously operating, parameters may be set to intermittently record at pre-set, specified times.

The above described continuous operation of the seismic units of the invention is particularly suited for use with a unique position determination method of the invention. Specifically, a unit's x, y and z position information is recorded as the unit is transported from an initial position, such as a storage location, to a deployment position out in the field. The positional information may be determined using an inertial navigation system that measures movement in each of the x, y and z dimensions as well as angular movement around each x, y and z axis. In other words, the system measures the six degrees of freedom of the unit as it travels from the initial location to the deployment position, and utilizes such measurement information to determine the location of the deployment position. In the preferred embodiment, such x, y and z dimensional information can be determined utilizing accelerometers. Angular orientation, i.e., tilt and direction, information can be determined utilizing a tilt meter and a compass or other orientation devices, such as gyroscopes. In one embodiment of the invention, three accelerometers and three gyroscopes are utilized to generate the inertial navigation data used to determine the unit's deployment position.

In any event, by combining accelerometer and the tilt and direction orientation information as a function of time with the unit's initial position and velocity at the time of initial deployment, the travel path of the unit and hence the deployment location of the unit, can be determined. Time sampling will occur at appropriate intervals to yield the accuracy needed. Time sampling between various measurement components may vary. For example, data from the compass, used to measure direction, and the tilt meter, used to measure tilt, may be sampled more slowly than data from the accelerometers. Heretofore, no other seismic unit has utilized one or more accelerometers to determine location in this way. In this regard, the method and system replaces the need to determine location utilizing other techniques, such as through GPS or the like.

Because a unit is already recording data at the time of its transportation to and deployment in the field, x, y and z positional information is easily recorded on the unit and becomes part of the unit's complete data record.

To the extent clock **20** is a crystal clock, one method of the invention is to make clock corrections to compensate for aging of the clock's crystals. Specifically, it has been determined that seismic data can be effected by the aging of crystals within a unit's crystal clock.

Typically, the aging curve for a given crystal will be logarithmic for an initial period of time and gradually transition into a more linear curve over an extended period of time. As such, the curve has a significant slope at the beginning of the aging process and a more linear, flat slope at as the aging process continues over time. In this regard, a seismic unit will